



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBE117-12010W61-1
Job Sheet 185543



Part No: RBE117-12010W61-1

Job Qty: 1 ea

Part Name: Gear Wrench



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 10/29/18

Job Tracking No:

Due Date: 12/7/18

Created By: Patrick Lussier

Type: Stock

Description:

Note: DWG RBE117-12010W61 Rev.1 IPP Rev. A 18.10.19 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	1 pcs		12/7/18	0.00	0.00	Purchasing		DEC 10 2018
110	Packaging	1 pcs		12/7/18	0.00	0.00	Packaging2		DEC 10 2018
120	QC	1 pcs		12/7/18	0.00	0.00	QC6		38
130	Packaging	1 pcs		12/7/18	0.00	0.00	Packaging3		9-89
140	QC21-FG	1 Ea		12/7/18	0.00	0.00	QC21		DEC 11 2018

Part Op 100 - Issue PO to P.J. MACHINAGE P/O: 041509 MANUFACTURE RBE117-12010W61-1 AS PER DWG -Certificate
Descriptions: of conformity is required

Oct 29, 2018 x 1 Rh

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBE117-12010W61-1P	Wrench Set, Torque Multiplier	1 (1 ea)	100-Purchasing	S136247

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	RBE117-12010W61-1P	1	0	0

Part Specifications

Specifications could not be found.



Container No: S136247



Part: RBE117 - 12010W61 - 1

Job No: 185543

Serial No/Batch: S136247

Revision: 1

Inspector:

Exp Date:

Instructions:

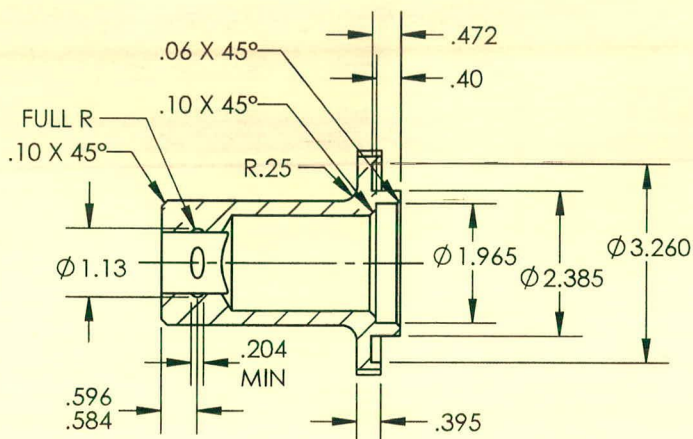
Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 12/19/18

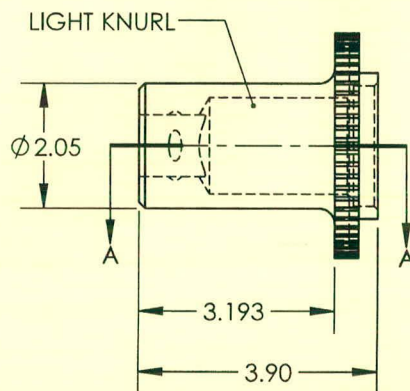
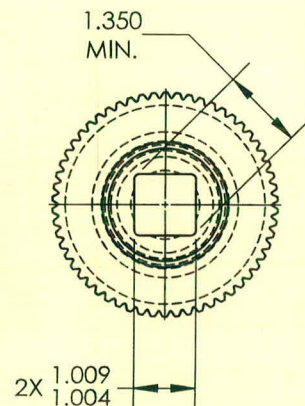
Plex 10/29/18 3:56 PM dart.Lussier.Patrick

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

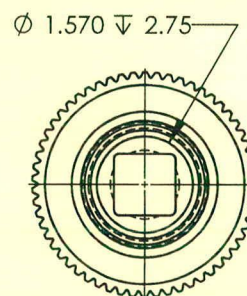
REVISIONS			DATE	INITIAL	APPROVED
REV	ECR	DESCRIPTION			



SECTION A-A



GEAR WRENCH



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 185427 M.C.
187026



EXTERNAL SPLINE DATA

STANDARD	ANSI B92.1-1996
FILLET ROOT	SIDE FIT
CLASS 5-ANSI	SLIP FIT WITH MATING PART
NUMBER OF TEETH	58
DIAMETRAL PITCH	16/32
PRESSURE ANGLE	30°
MAJOR MIN. DIA.	Ø3.6650
MAJOR MAX. DIA.	Ø3.6880
PIN DIAMETER	Ø.1200



TITLE WRENCH SET - TORQUE MULTIPLIER

DWG NO.	RBE117-12010W61-1	REV	1
MAT'L	4140/4142	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± .5° .X ± .1 SURFACES = 125°	
HEAT TREAT	RC 28-32		
FINISH	BLACK OXIDE		
SPEC	QMSI-6.2.2 REV D		
DRAWN BY:	CLOUGH		
CHECKED:	CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
OPPS APPR:	ANDERSON		
QA APPR:	LINDSAY		
APPROVED:	GILBERT	USED ON MODEL EC145	
SCALE	1:3	DATE	2/23/2016
		SHEET 2 OF 2	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041509**

Supplier: PJM001-VC
P.J. Machinage
1381 Rte Cite-Des-Jeunes
St-Lazare
QC
J7T 2B8
Phone: 450-455-0705

PO No: PO041509
PO Date: 10/29/18
Due Date: 11/30/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Phone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
①	185543	RBE117-12010W61-1P			Wrench Set, Torque Multiplier	Firmed	-	11/30/18 DEC 10 2018	1 Ea	0 Ea	1 Ea	\$625.00/Ea	\$625.00
②	185427	RBE117-12010W61-1P			Wrench Set, Torque Multiplier	Firmed	-	11/30/18 DEC 10 2018	1 Ea	0 Ea	1 Ea	\$625.00/Ea	\$625.00
③	185538	RBE117-12010W61-1P			Wrench Set, Torque Multiplier	Firmed	-	11/30/18 DEC 10 2018	1 Ea	0 Ea	1 Ea	\$625.00/Ea	\$625.00
④	185542	RBE117-12010W73-1P			Cap	Firmed	-	11/30/18 DEC 10 2018	3 Ea	0 Ea	3 Ea	\$705.00/Ea	\$2,115.00
Grand Total:												\$3,990.00	

Order Notes

Procurement Quality Clauses
A005 RIGHT OF ENTRY
A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 10/29/18 4:03 PM dart.Lussier.Patrick

Shipping Order

30/10/2018

P.J. Machinage (9052 9470 Qc Inc).
1381, Rte Cité-Des-Jeunes,
St-Lazare, Qc
J7T 2B8

Tel. : 450 455-0705

Customer : 628

Dart Aerospace Ltd.
Patrick Lussier
1270 Aberdeen St
Hawkesbury, Ontario
K6A 1K7

Order : 7213
Reference : PO041509-8/O : 7213
Bid : 15335
Ship : Votre camion

Ship To

Same

Fax: 1 613 632-5246

Item No.	Description	Qty	Qty. Delivere	B/O Qty
J-7213-A/628	Wrench Set (Item 1 only) - Torque Multiplier RBE117-12010W61-1 Rev. 1	3	3 ✓	Ø 38 9-89
J-7213-B/628	Retainer Plate RBE117-12010W73-1 Rev. 1 Mat: 4140 HT	3	3 ✓	Ø

P.J. Machinage retains ownership of all goods sold and other work-product delivered to or performed for its customer until full and complete payment of the underlying invoice, even in circumstances where the part to be machined or materials were provided by the customer. In cases where the part of materials belonged to the customer before it is remitted to P.J. Machinage for the purpose of performing work thereon, its delivery to P.J. Machinage shall entail a transfer of the underlying rights of ownership of the customer over said part or materials.

Shipping : Votre Camion
Package No : _____
Merchandise Received: 07/12/2018

Ref. : _____

PJ Machinage**Certificate of conformance****Sold to:**

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON, K6A 1K7

Supplier address:

PJ Machinage
1381 Route Cité-Des-Jeunes
St-Lazare, Qc, J7T 2B8

Purchase Order: P0041509

This is to certify that the below names items were inspected and/or tested to your drawings, specifications and purchase order. Objective evidence are shipped with the products and are on file to support the verifications and/or tests and can be made available on request, unless otherwise noted.

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
RBE117-12010W61-1 ✓ Rev.1	3 ✓	<u>Wrench Set (Item 1 only)-Torque Multiplier</u>
RBE117-12010W73-1 ✓ Rev. 1	3 ✓	<u>Retainer Plate</u>

 , December 03 , 2018



ACIER VANG JARI LTÉE

2205 de l'Aviation, DORVAL, QUÉBEC, Canada, H9P 2X6.

Tel: (514) 685-1515 fax: (514) 685-1516

CERTIFICATE OF COMPLIANCE / CERTIFICAT DE CONFORMITÉ

Order No. / No. Commande	CUSTOMER / CLIENT	Packing slip / No. d'expédition	DATE
Order No. / No. Commande	CUSTOMER / CLIENT P. J. MACHINAGE	Packing slip / No. d'expédition	DATE
MATERIAL ID# / No. MATÉRIEL 2014-1115	GRADE / NUANCE AISI 4140	HEAT TREATMENT / TRAITEMENT THERMIQUE Q.T.S.R / TREMPÉ REVENU - RECUIT DE DÉTENTE (RONDS)	HEAT / COULÉE J0702

SHAPE / FORME	SIZE / DIMENSION	SPECIFICATIONS
Round / Rond	7.000" in.	NA
PAYS D'ORIGINE:	FRANCE	

CHEMICAL COMPOSITION / ANALYSE CHIMIQUE

	Carbon (C)	Silicon (Si)	Manganese (Mn)	Phosphorus (P)
mini/maxi	0.380 0.430	0.150 0.350	0.750 1.000	0.035
actuel (%):	0.420	0.273	0.926	0.010
	Sulfur (S)	Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)
mini/maxi	0.040	0.800 1.100	0.000 0.250	0.150 0.250
actuel (%):	0.013	1.066	0.232	0.241
	Copper (Cu)	Vanadium (V)	Aluminium (Al)	Tungsten (T)
mini/maxi	0.350	---	---	---
actuel (%):	0.147	0.000	0.029	0.000

MECHANICAL PROPERTIES / PROPRIÉTÉS MÉCANIQUES

Yield strength / Élasticité	Tensile / résistance à la traction	Elongation / allongement (%)	Reduction of area / surface (%)	Hd/dure surface
128,702 PSI	148,886 PSI	15.0%	58.0%	327 BHN

No weld repairs performed during the manufacturing of this product. We hereby certify that the above results have been verified and conform to the above mentioned specifications.

Aucune réparation exécutée par soudure durant la fabrication de ce produit. Par la présente nous attestons que les résultats ci-haut mentionnés ont été vérifiés et sont conformes aux spécifications.

Keith BALL - Branch manager



7213-A
Certificat de Conformité / Certificate of Compliance
(014803-1)

FM-1020 Rev 20151005

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
Tel: 514-335-3666 Fax: 514-335-3868
www.groupaltech.com

Bon de Livraison / Packing Slip

014803 - 1

Livré à / Ship to

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes

St-Lazare, QC, J7T2B8

CANADA

Tel.: 450-455-0705 Fax.: 450-455-1167

Client / Customer:

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes

St-Lazare, QC, J7T2B8

CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By		Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.			
04-Dec-2018		Aman				135643			
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details Job # / Ref #	Description pièce(s)		CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	LOT 7 PCS Rev.	LOT 7 PCS 01 -OXIDE BLACK [OXIDE BLACK]		BLACK-OXIDE MIN-CHG	7	7	0	0	0

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.

QUANTITÉ:

4



NOM DE LA PIÈCE:

RBE117-12010 W61-1 Rev. 1

MATÉRIEL:

PAGE No.:

15-11-20/8

001

OBSERVATION:

SIGNATURE RESPONSABLE:

John / Richard

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS



Earle M. Jorgensen
(Canada) Inc.

Page 01 of 02

Certification Date
6-SEP-2018

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

135214

PART NUMBER/NUMÉRO DE PIÈCE

506596

EARLE M JORGENSEN CAN DIV RMCL
1255, AVE LAPLACE
VILLE DE LAVAL QC H7C 2N6

Invoice Number
S710845

SOLD TO: P.J. MACHINAGE
VENDU À: 9052-9470 QUEBEC INC
1381 ROUTE DE LA CITE DES JEUNES
SAINT- LAZARE QC J7T 2B8

SHIP TO:
EXPÉDIÉ À:

P.J. MACHINAGE
9052-9470 QUEBEC INC.
1381 ROUTE CITE DES JEUNES
SAINT- LAZARE QC J7T 2

Description: 4140/4142 HR HT BAR STRESS FREE 269/321
4-1/4 RD X 20' R/L Line Total: 1062 LB
HEAT: 73106940 ITEM: 506596

Specifications:

ASTM A434 GR BC 17
ASTM E112
ATM A370
ASME SA193 B7

ASTM A29 16
ASTM A304
SPEC 1E38
EN 10204 3.1B

MIC 12016 ADD 1 16
ASTM E381
ASTM A322 13
JDM AO QL2 4/17

CHEMICAL ANALYSIS

C	MN	P	S	SI	NI	CR	MO
0.42	0.86	0.01	0.022	0.18	0.13	0.93	0.15
CU	SN	AL	V	NB	B	CA	N
0.21	0.008	0.024	0.003	0.001	0.0002	0.0008	0.0076

RCPT: R386324

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR KSI	ULT TEN KSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS BHN
	106.0	132.0	19.0	55.0	313

IDEAL DIAMETER : 4.693 IN GRAIN SIZE : 8 -

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.
The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession./Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

CERTIFICATE F TEST
CERTIFICAT D'ESSAIS



Earle M. Jorgensen
(Canada) Inc.

Page 02 of 02

Certification Date
6-SEP-2018

7213-B

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

135214

PART NUMBER/NUMÉRO DE PIÈCE

506596

EARLE M JORGENSEN CAN DIV RMCL
1255, AVE LAPLACE
VILLE DE LAVAL QC H7C 2N6

Invoice Number
S710845

SOLD TO: P.J. MACHINAGE
VENDU À: 9052-9470 QUEBEC INC
1381 ROUTE DE LA CITE DES JEUNES
SAINT-LAZARE QC J7T 2B8

SHIP TO:
EXPÉDIÉ À:

P.J. MACHINAGE
9052-9470 QUEBEC INC.
1381 ROUTE CITE DES JEUNES
SAINT-LAZARE QC J7T 2

Description: 4140/4142 HR HT BAR STRESS FREE 269/321
4-1/4 RD X 20' R/L Line Total: 1062 LB
HEAT: 73106940 ITEM: 506596

STRAND CAST REDUCTION RATIO 5.1 TO 1 VACUUM DEGASSED
MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL
ULTRASONIC: YES
THERMAL TREATMENT: OK
AUST 1650°F/ 13.00 MIN
QUENCH 98°F/ MEDIA: WATER
TEMPER 1295°F/ 13.00 MIN

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ



7213-B FM-1020 Rev 20151005
Certificat de Conformité / Certificate of Compliance
(014803-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
Tel: 514-335-3666 Fax: 514-335-3868
www.groupaltech.com

Bon de Livraison / Packing Slip

014803-1

Livré à / Ship to

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes

St-Lazare, QC, J7T2B8

CANADA

Tel.: 450-455-0705 Fax.: 450-455-1167

Client / Customer:

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes

St-Lazare, QC, J7T2B8

CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.			
04-Dec-2018		Aman			135643			
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Quantités / Quantities Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	LOT 7 PCS Rev.	LOT 7 PCS 01 -OXIDE BLACK [OXIDE BLACK]	BLACK-OXIDE MIN-CHG	7	7	0	0	0

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

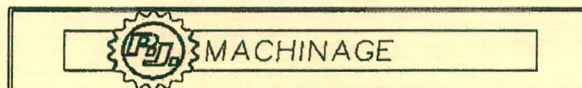
Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.

CLIENT: 628
JOB No.: 7213-B
PLAN No.:
P.O.: P0041509
QUANTITÉ: 3



DATE: 9/11/10
 FORMAT No.: 001
 PAGE No.:

CONTRÔLE DE QUALITÉ

RB5117-12010W73-1 Rex1 MATÉRIEL: 414047

DIMENSIONS DE DESSIN ET TOLERANCE									
PIÈCE	6.280	2.52	1.85	2.360	2.076	.315	.310	.24	
No.	8.4079	1.635	Ø.343	Ø 5.5 - (20)					
	6.493	1.638	Ø.343						
DIMENSIONS DE LA PIÈCE									
	6.281	2.521	1.850	2.361	2.0765	.215	.310	.243	
	6.281	2.521	1.850	2.361	2.0770	.315	.310	.240	
	6.281	2.521	1.850	2.361	2.0785	.315	.310	.240	
	6.281	2.521	1.854	2.361	2.076	.315	.307	.242	
	Ø.490	Ø 1.63	Ø.343	Ø 5.500					
	Ø.490	Ø 1.6063	Ø.343	Ø 5.510					
	Ø.490	Ø 1.63	Ø.343	Ø. 5.500					
	494	1.632	343	5.500					

OBSERVATION:

SIGNATURE RESPONSABLE:

re Richard 

